IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

Claim 1 (~~canceled~~).

2. (currently ~~amended~~)A control method of assigning a channel to a modem processing unit of an RF base station so as to demodulate a base band received signal and modulate a transmit data signal, said modem processing unit operating in a time-multiplexing manner, comprising the steps of:

converting a plurality of carrier frequency band signals received by a plurality of antennas provided in said RF base station to a plurality of base band received signals in an RF unit;

storing a plurality of said base band received signals in a buffer memory; and

assigning a channel to said modem processing unit, for demodulating said base band received signals and for modulating said transmit data signals, including the steps of:

(a) enabling a controller to check the load of said modem processing unit; and

(b) enabling said modem processing unit to assign a channel to said modem processing unit if said modem processing unit has a minimal level of ~~still has a~~ load margin.

3. (currently ~~amended~~) A control method of assigning a channel to a plurality of modem processing means of an RF base station so as to demodulate a

base band received signal and modulate a transmit data signal, said modem processing means each operating in a time-multiplexing manner, comprising the steps of:

converting a plurality of carrier frequency band signals received by a plurality of antennas provided in an RF base station to a plurality of base band received signals in an RF unit;

storing a plurality of said base band received signals in a buffer memory; and

assigning a respective channel to a respective modem processing means for demodulating said base band received signals and for modulating said transmit data signals, including the steps of:

(a) enabling a controller to check the loads of a plurality of said modem processing units; and

(b) assigning a channel to a modem processing means still having a minimum level of load margin if there are a plurality of said modem processing means still having a load margin, respectively.

4. (currently amended) A control method of assigning a channel to a modem processing unit of an RF base station so as to demodulate a base band received signal and modulate a transmit data signal, said modem processing unit operating in a time-multiplexing manner and being provided with a plurality of calculation means blocks, each provided for a plurality of calculation means having the same calculation interval, said method comprising the steps of:

converting a plurality of carrier frequency band signals received by a plurality of antennas provided in said RF base station to a plurality of base band received signals in an RF unit;

storing a plurality of said base band received signals in a buffer memory; and

assigning a channel to said modem processing unit, for demodulating said base band received signal and modulating said transmit data signal ~~is done in a step~~], including the steps of:

(a) enabling a controller to check loads of a plurality of said calculation means~~;~~, and

(b) assigning a channel to any calculation means having a minimum level of load margin if there are a plurality of said calculator means having a load margin, respectively.

5. (previously amended) The control method according to claim 3, wherein channel assignment to a plurality of said modem processing means is performed in such a way that a channel is assigned to a modem processing means having a higher load margin, selected from those modem processing means having a load margin, respectively.

6. (previously amended) The control method according to claim 3 wherein channel assignment to a plurality of said modem processing means is performed in such a way that a channel is assigned to a modem processing means having a lower

load margin, selected from those modem processing means having a load margin, respectively.

7. (previously amended) The control method according to claim 3, wherein channel assignment to a plurality of said modem processing means is in a hand-over processing executed by a mobile station moving from a first sector controlled by said RF base station to a second sector so that a second channel for demodulating a second signal received by a second antenna of said RF base station is assigned to a modem processing means of said RF base station to which a first channel for demodulating a first signal received by a first antenna is assigned, said first signal being transmitted from said RF mobile station and forming a first sector, said second signal being transmitted from said RF mobile station and forming a second sector.

8. (previously amended) The control method according to claim 7, wherein the load of a modem processing means is checked before said second channel is assigned to said modem processing means so as not to assign said second channel to said modem processing means when said modem processing means is loaded inversely.

9. (previously amended) The control method according to claim 3, wherein channel assignment to a plurality of said modem processing means is performed in a hand-over processing executed by a mobile station moving from a first sector controlled by said RF base station to a second sector so that a second channel for

demodulating a second signal received by a second antenna of said RF base station is assigned to a modem processing means of said RF base station to which a first channel for demodulating a first signal received by a first antenna is assigned, said first signal being transmitted from said RF mobile station and forming a first sector, said second signal being transmitted from said RF mobile station and forming a second sector; and

said first channel for demodulating said first signal and said second channel for demodulating said second signal are held in the same modem processing means.

10. (currently amended) A control method of assigning a channel to execute a hand-over processing ~~in~~of an RF mobile station moving ~~between sectors~~ from a first sector controlled by a first antenna of an RF base station to a second sector controlled by a second antenna; wherein said first channel for demodulating said first signal received by said first antenna from said RF mobile station and said second channel for demodulating said second signal received by said second antenna from said RF mobile station are assigned to the same modem processing ~~means~~unit.

11. (currently amended) The control method according to claim 10~~-1~~, wherein said channel assignment is performed in said hand-over processing ~~started~~ so that channel assignment to a plurality of modem processing ~~means~~ units of an RF base station is changed, whereby ~~first and second channels are assigned to the same modem processing means when it is impossible to assign a second channel~~

~~newly to a modem processing means to which said first channel is already assigned~~if the second channel cannot be assigned to a modem processing unit to which the first channel is currently assigned, the first and the second channels are assigned to another modem processing unit capable of accommodating both the first and the second channels.

12. (currently amended) A control method of assigning a channel comprising the step of:

assigning a first channel for demodulating a first frequency signal of an RF mobile station, received by a first antenna of an RF base station from said RF mobile station, and a second channel for demodulating a second frequency signal of said RF mobile station, received by a second antenna of said RF base station from said RF mobile station, to ~~the~~a same modem processing ~~means~~ unit of said RF base station.

13. (currently amended) The control method according to claim 12, wherein said channel assignment is performed ~~when a second channel cannot be assigned newly to a modem processing means of said RF base station, to which said first channel is assigned,~~ so that channel assignment to a plurality of said modem processing means of said RF base station is changed, whereby if the second channel cannot be assigned to a modem processing unit to which the first channel is currently assigned, the first and the second channels are assigned to another modem processing unit capable of accommodating both the first and the second

channels~~thereby assigning said first and second channels to the same modem processing means~~.